

K-POP GENRES: A CROSS-CULTURAL EXPLORATION

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ABSTRACT

Current music genre research tends to focus heavily on classical and popular music from Western cultures. Few studies discuss the particular challenges and issues related to non-Western music. The objective of this study is to improve our understanding of how genres are used and perceived in different cultures. In particular, this study attempts to fill gaps in our understanding by examining K-pop music genres used in Korea and comparing them with genres used in North America. We provide background information on K-pop genres by analyzing 602 genre-related labels collected from eight major music distribution websites in Korea. In addition, we report upon a user study in which American and Korean users annotated genre information for 1894 K-pop songs in order to understand how their perceptions might differ or agree. The results show higher consistency among Korean users than American users demonstrated by the difference in Fleiss' Kappa values and proportion of agreed genre labels. Asymmetric disagreements between Americans and Koreans on specific genres reveal some interesting differences in the perception of genres. Our findings provide some insights into challenges developers may face in creating global music services.

1. INTRODUCTION

The overemphasis on Western music and context has been a long-standing issue in the Music Information Retrieval (MIR) domain. To date, there are only a small number of studies that deal with the organization of, and access to, non-Western music. This is a critical issue considering the trend of increasing global distribution and appreciation of music [10].

There are a wide variety of different types of metadata which can describe music, but music genres in particular are considered one of the primary methods for organizing and retrieving music ([13], [4]). However, we currently have a limited understanding of the genres of popular music in non-Western cultures. What kinds of genres are used in these cultures and how similar or different are they to genres used in Western cultures? What kinds of issues or challenges exist in categorizing non-Western popular music by genre? How are the genres used in music-related resources? How are they perceived by average music users from Western vs. non-Western culture?

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This work attempts to bridge the gap in our knowledge of music genre in non-Western cultures by analyzing the genres used for K-pop (Korean Pop), and explore how K-pop genres are perceived by users cross-culturally. Korea is a particularly interesting case in which to study cross-cultural issues in music genre, as the country was heavily influenced by American pop culture from the 1950s through the early 21st century, but is now exporting cultural objects and music which are appreciated by foreigners and actively sought by people outside of Korea [11]. This suggests that a lot of cross-cultural music seeking is happening in this space from both directions. Genre will be extremely important for those users as it can serve as useful metadata to discover new music they want to listen to. The main objectives of our study are: 1) to improve our understanding of how genre labels are used in the Korean context and, 2) to explore cross-cultural perception of K-pop genres. By doing so, we hope to obtain insights into what kinds of challenges we may encounter when we start building a music collection targeted for a global user base where cross-cultural music seeking is unavoidable.

2. BACKGROUND AND PRIOR WORK

Despite the increasing number of user studies in the MIR domain, there are still only a handful of cross-cultural studies that investigated issues in music information needs, seeking, organization, management, and consumption. One such study on non-Western music, in particular Korean music, was [5]. Lee et al. [5] collected music queries from Google Answers and Naver Knowledge-iN (지식 iN), and did a comparative analysis. They identified several challenges that Korean users experienced when trying to find Western music, including: 1) common failures in providing traditional bibliographic information such as title or name of the performer(s), 2) difficulty in understanding and using Western genre labels, and 3) difficulty in using lyrics as they often consist of common words and lack discriminating power. The findings support the necessity of establishing new access points for accommodating cross-cultural music searching such as associative metadata (e.g., source of music).

The issue of genre is also raised in [6] by McEnnis and Cunningham as they discussed how music can be “interpreted in terms of how it expresses local issues and concerns, often quite removed from the circumstances that inspired the music’s creation.” They conclude that attempting to define universal meanings for music across cultural boundaries is destined to fail. This strongly supports the need to investigate how these genres are actually used in different cultures in order to provide better contextual information to potential users.

Norowi et al. [8] and Doraisamy et al. [1] investigated using MARSYAS for automatic genre classification given a mix of Western and traditional Malay genres and demonstrated that it is possible to classify non-Western music with such systems. However, Doraisamy et al. [1] did note that adapting digital music library systems for the retrieval of Malaysian music was challenging due to differences in genres and musical structures.

One theme emerging from a number of these studies is the issue of music genre. Genre is the primary means by which listeners search and browse music [4], [13], yet studies on genre classifications show that there is hardly any convergence as demonstrated in this quote from [9]:

“Easy listening” in one classification is called “Variety” in another and worse, taxonomy structures do not match: “Rock” for instance denotes different songs in different classifications.

Navigating through these genre classification systems is very likely to get more complicated as we move across different cultures. This is already happening quite frequently with the emergence of new tools and technologies for music distribution targeted for global music markets and users. For instance, K-pop which used to be a relatively obscure music category outside of Korea is now appreciated in numerous countries around the world due to the fact that users can easily access K-pop songs through media like YouTube¹. As users get exposed to music from unfamiliar cultures and in unknown languages, it will become increasingly important to provide them with intelligent access to music resources, and despite its flaws, genre is still a widely used descriptor for organizing and accessing music.

3. STUDY DESIGN

3.1 Analysis of Korean Genre Labels

In order to understand the different types of Korean music genres, we collected several hundred genre labels from the following list of popular Korean commercial websites (sorted alphabetically) for music distribution.

- 벅스뮤직 (Bugs Music): <http://www.bugs.co.kr/>
- 싸이뮤직 (CyMusic): <http://music.cyworld.com/>
- 다음뮤직 (Daum Music): <http://music.daum.net/>
- 엠넷 (M.net): <http://www.mnet.com/>
- 멜론 (Melon): <http://www.melon.com>
- 네이버뮤직 (Naver Music): <http://music.naver.com/>
- 올레뮤직 (Olleh Music): <http://www.ollehmusic.com/>
- 소리바다 (Soribada): <http://www.soribada.com/>

We examined the different types, organizational structures, and examples of music that are categorized into each genre category used in these websites.

3.2 User Annotation of K-pop Music

Three American and three Korean annotators were hired to provide genre labels for the 1894 songs found in a collection of K-Pop music collected as part of a new K-

MIREX (Music Information Retrieval Evaluation eXchange) data set. There is always a resource tradeoff between the number of annotators and the number of songs to be annotated. Choosing six annotators is consistent with established practice in the inter-indexer consistency literature [6] while allowing us to collect labels on a wide variety of songs. The annotators generated a total set of 11,352 song-label pairs. Annotators chose from eight genre labels: *Ballad*, *Dance/Electronic*, *Folk*, *Hip-hop/Rap*, *Rock*, *R&B/Soul*, *Trot*, and *Other*. These genres were selected based on the analysis of genre labels used in Korean music websites (Further discussed in Section 4.1). A brief training manual providing short descriptions of each genre along with exemplar audio samples was created to train the annotators. This manual was prepared in both Korean and English.

4. DATA AND DISCUSSION

4.1 Overview of the Korean Genre Labels

From eight major Korean music distribution websites, we collected all the genre labels used for organizing their music. 307 unique labels were distilled from the aggregate collection of 602 labels after removing duplicates (including different transliterations of the same term). We present the top-level genre categories used in Table 1. A solid dot in Table 1 represents that the specific genre category was used on the website. An open dot signifies that a genre was used in conjunction with another genre (e.g., Jazz/Blues). The genres are ordered by the frequency of occurrences across multiple websites and only ones used in more than one website are presented in Table 1. The genre labels that only appeared once at the top level include: 7080, Music used in commercials, Prenatal education, Trot (Bugs); Chinese music (Melon); Country/Folk, Easy listening, Punk; Reggae (M.net); Funk (Soribada); and Rap (Cy).

Many of the genres used in Korean Websites were the same or very similar (e.g., Classic for Classical music) to the ones used in North America, most likely due to the strong American influence on K-pop music. For instance, genres such as Hip-hop, Rap, and R&B were introduced to South Korea by Korean American musicians or students who studied abroad in the US in the mid-1990s, and they continue to act as leading voices in those genres today [10]. In addition to this cultural proximity created by influences of popular culture or religion, the regional proximity also plays a role in which genres are prominently represented in a particular culture. This is evidenced by J-pop which was used in 7 out of 8 websites as a top-level category. There are other examples: for instance, on All Music Guide (<http://www.allmusic.com>) which is based in United States, Latin is one of the top categories although it did not appear anywhere in the top categories of Korean websites. In some sense, it is natural for users to gravitate toward music that is from places near them since there is a better chance for them to be exposed to such music.

¹ YouTube launches exclusive K-Pop Channel. Dec, 2011. (<http://www.soompi.com/news/youtube-launches-exclusive-kpop-channel>)

	Bugs	Cy	Daum	M.net	Melon	Naver	Olleh	Soribada
OST/O.S.T./Soundtrack	●	●	●	●	●		●	●
J-POP/Japanese music	●	●	●	●	●		●	●
CCM	●	●			●		●	●
Jazz	●	●	○ blues	○ blues	●		●	●
Gayo (가요)/K-pop	●		●	●	●		●	●
Pop/Pop song	●		●	○ soul	●		●	●
Classic (클래식)/Classical	●	●	○ new age	●	●			●
New Age	●	●	○ classic		●			●
Gukak (국악)	●			●	●		●	
Religious music			●	●	●		●	
World music			●	●	●			●
Hip-hop	○ R&B	○ rap		●				●
Dongyo (동요)/Children's	●			●	●			
Electronic/Electronica		●		●				●
Rock		●		○ metal				●
R&B	○ hip-hop	○ soul						●
Indie	●							●
Korean music (국내음악)		●				●		
Foreign music (국외음악)		●				●		
Metal				○ rock				●
Soul		○ R&B		○ pop				
Blues			○ jazz	○ jazz				
Other/Etc.			●			●	●	●

Table 1. Comparison of the top-level genres of eight Korean music websites

Another interesting observation of these data is that OST (Original Soundtrack) is the most commonly used top-level genre label. OST is used to refer to songs that were used in TV shows, dramas, movies, etc. The prevalence of this label confirms the findings in [4] that information on “associated use” (e.g., movie, ad) was the most commonly used feature in music identification queries. In Korea, it is fairly common for new or relatively unknown artists to become extremely popular “overnight” due to the exposure of their songs in TV commercials or dramas (e.g. *Americano* by 10cm; *Honey Honey Baby* by Yozoh).

Broad genres encompassing a wide range of Korean music styles were present in all websites. The *Gayo* (가요) (the term referring to all Korean popular music, sometimes used interchangeably with K-pop) and Korean music (국내 음악) genres contained subdivisions in five of the websites. Table 2 shows the subdivisions of the “*Gayo*/Korean Music” category from the five websites. The most commonly used sub-genres are Ballad, Dance, Hip-hop, and Rock. The sub-genres that appeared only once include: Club (Bugs); Jazz/Blues, Idol, 7080 (Daum); Urban, and Rap (M.net).

	Bugs	Daum	M.net	Melon	Naver
Ballad	○ R&B	●	●	●	●
Dance	○ club	●	●	●	●
Hip-hop	●	●	○ rap	○ rap	●
Rock	●	●	●	●	○ folk
Trot		●	●		●
Folk	●	●	●		
R&B	○ ballad	○ soul	○ urban		
Electronic(a)		●	●	●	
Indie		●	●		

Table 2. Subdivision of K-pop in 5 Korean websites

Based on our analysis, we decided to select the most commonly used eight genre labels for our annotation experiment: *Ballad*, *Dance/Electronic*, *Folk*, *Hip-hop/Rap*, *Rock*, *R&B/Soul*, *Trot*, and *Other*. We grouped two genres into one label when the boundaries seemed fuzzy. This was evidenced by a number of songs being categorized into both genres across multiple websites.

4.2 Results of the Annotation Experiment

4.2.1 Agreements among Users

Fleiss’ kappa is a standard measure of inter-rater reliability when there are more than two annotators, and when the rated variable is categorical [2]. As there are three annotators in each cultural group and the genre annotations are categorical, we used Fleiss’ kappa to measure the inter-rater reliability among the annotators. The results showed that the Koreans reached a higher agreement level ($\kappa = 0.664$) than the Americans ($\kappa = 0.413$). According to [2], these κ values indicate substantial and moderate agreement, respectively. The agreement level among all six annotators was also moderate ($\kappa = 0.477$). This indicates that while there exists a common understanding of K-Pop genres across cultural boundaries, it is more consistent among Korean listeners than American listeners. While this result is not unexpected as the music stimuli were K-Pop and the genre labels were developed from analyzing Korean websites, it indeed demonstrates the challenge in designing cross-cultural MIR systems using genre as access points to serve users from different cultural backgrounds.

Figure 1 illustrates the number of songs that received three, two, or zero “agreed” (i.e., identical) labels within the Korean and American annotator groups. Among the Koreans, 63% (1189/1894) songs scored three agreed la-

bels as opposed to 36% (688/1894) for the Americans. If we loosen the agreement criterion to majority vote (at least two annotators agree), Korean consistency was 96% (1820/1894) while American consistency was 87% (1654/1894). As there are eight genre choices for each song, the probabilities for annotators in each group to reach agreement by chance or idiosyncratic ratings are extremely low: $(1/8)^3 = 0.19\%$ for unanimous agreement and $(1/8)^2 = 1.56\%$ for agreement by two. Therefore, comparing songs with genre labels agreed by even a small number of annotators can still show the differences influenced by the cultural background of the annotators.

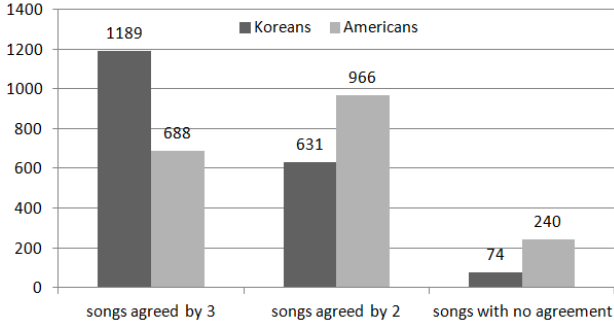


Figure 1. Number of songs that received three, two, or zero agreed labels

To investigate possible cultural differences between the Koreans and Americans, we looked at the distribution of songs with unanimous labeling within each annotator group. Table 3 presents the distribution of genre labels for the overlap of 505 songs unanimously labeled within each group. A chi-square test of independence on these distributions revealed that the culture factor and genre factor were independent ($\chi^2 = 2.16$, $df = 6$, $p = 0.90$). This indicates that cultural background did not affect genre judgments for the songs with unanimous agreement.

	Ballad	Dance	Folk	Hip-hop	R&B	Rock	Trot	Total
KO	236	93	4	25	63	53	31	505
AM	227	87	3	24	78	54	32	505

Table 3. Distribution of songs with unanimous labels

However, when we consider songs with two or three agreed labels, the results are different. With this relaxed criterion, we can find the overlap of 1,602 songs between the Koreans and Americans. The distribution across genres is shown in Table 4. A chi-square test of independence on this distribution indicates that culture and genre factors were *not* independent ($\chi^2 = 56.70$, $df = 6$, $p < 0.001$). In other words, the judgments on genre were related to users’ cultural background.

The discrepancy on these two test results suggests that some songs are “exemplary” songs that have strong musical characteristics representing a particular genre. These songs will receive unanimous judgments regardless of cultural background. However, for songs with genres that are less obvious, cross-cultural difference is significant. In other words, cultural background *does* seem to affect how different judgments are made. This is informative for designing cross-cultural MIR systems as in most cases

genres are not highly agreed upon even within a single culture, due to the issues of variations in definition and/or hybrid genres (further discussed in Section 4.3).

	Ballad	Dance	Folk	Hip-hop	R&B	Rock	Trot	Total
KO	759	257	60	59	153	174	140	1602
AM	642	208	57	56	281	212	146	1602

Table 4. Distribution of songs with two or three agreed labels

4.2.2 Disagreement between Genres

We also examined which genres showed the highest cross-cultural differences. As there was a statistically significant relationship between culture and genre when considering the 1,602 songs with at least two agreed labels, we now examine the disagreement between each pair of genres on this data set. In Table 5, each cell shows the number of songs labeled as one genre by Koreans (column) and another by Americans (row). The cells on the diagonal (highlighted cells) are numbers of songs agreed by the two groups, while other cells represent the disagreement between the two groups. The matrix shows asymmetric disagreements between Americans and Koreans on many genres.

The bolded numbers in Table 5 indicate major disagreements between Korean and American annotators. The largest discrepancy was the 121 songs labeled as Ballad by Koreans but R&B by Americans. Considering the two groups only agreed on a total of 122 R&B songs, this discrepancy is very substantial. Also note that of the 57 songs labeled as Folk by Americans, 18 songs were labeled as Trot by Koreans. This may be due to the disagreement resulted by same genre labels referring to different types of music in Western vs. Korean cultures. Historically, Ballad and Folk have evolved somewhat differently in K-pop culture than the Western culture and both genres are closely associated with music from a particular time period (i.e., Ballad from the 80s-90s, and Folk from the 60s-80s). Therefore a song that sounds like Ballad but is from the 00s may not be categorized as Ballad by Koreans [see Section 4.3.2 for more discussion].

We also observed that among the 212 Rock songs annotated by Americans, 42 (18.92%) were labeled as Ballad by Koreans. This disagreement might be attributed to the hybrid genre Rock Ballad. Similarly, the disagreement between Ballad and Folk may be attributed to the hybrid genre Folk Ballad.

	KO	Ballad	Dance	Folk	Hip-hop	R&B	Rock	Trot	Total
AM		561	1	13	0	26	25	16	642
Ballad		561	1	13	0	26	25	16	642
Dance		7	184	1	6	2	4	4	208
Folk		10	0	27	0	0	2	18	57
Hiphop		0	15	0	39	1	1	0	56
R&B		121	20	1	8	122	7	2	281
Rock		42	25	6	6	0	128	5	212
Trot		18	12	12	0	2	7	95	146
Total		759	257	60	59	153	174	140	1602

Table 5. Cross-tabulation between genre annotations (majority votes) by Korean and American users

In summary, it is easier for Korean annotators to reach an agreement on the genres of K-Pop music than Americans. Difference on genre definitions and historical context in the two cultures might have caused the discrepancies between Koreans and Americans, especially for genres such as Ballad and Folk. Hybrid genres might also be a reason for disagreement. The comparison between annotations from two groups confirmed that it is challenging to identify genres across cultural boundaries.

4.3 Discussions

4.3.1 Variations in Genre Criteria

One reason why genre labels can be difficult to interpret, understand, or compare is because they are based on a range of different criteria. Among the genres we examined, the most common defining characteristic was indeed musical style. However, this is not always the case. We found that the following other dimensions were frequently used to define genres:

- **Associated use:** e.g., OST (Original Soundtrack), Soundtrack (사운드트랙), Commercial ads (광고음악)
- **Region:** e.g., J-pop (Japanese pop), Chinese music (중국음악), World music (월드뮤직)
- **Purpose:** e.g., Prenatal education (태교), Ringtones (벨소리), Meditation (명상), MR (Music Recorded: used for “Instrumental”)
- **Era:** e.g., 7080 (70s and 80s music), 00’ Dance

This issue is not unique to Korean music. Some of these genres can be observed in Western music genre classifications as well (e.g., World music). However, a number of examples appear to be unique to Korean music (e.g., 7080, MR), which can pose challenges when mapping genres across cultural boundaries. For example, the genre “MR” could probably be mapped to “instrumental” but what about 7080? For someone who is not familiar with the historical context of Korean popular music, such label is essentially meaningless.

Categorization of music based on regions, although commonly used, seems especially problematic and can pose a problem for mapping Korean genres to Western genres. K-pop is most likely categorized under World music in North America (if it is categorized at all) as well as J-pop, etc., but clearly that will not be the case in Korea and Japan. Also many Korean artists now release albums in other countries making it difficult to categorize their music based on the region. For instance, when the Korean musician Boa releases albums in Japan sung in Japanese, should that be categorized as K-pop or J-pop?

4.3.2 Discrepancies in Genre Usage

As noted in previous research [5], in Korea, the genre label Pop can be used to denote any Western popular music from outside of Korea as opposed to popular music originated from Korea (*gayo* or K-pop). The fact that you can use the label Pop as a broader term that encompasses all Western music and at the same time use it as a sibling category of Rock, Electronic, etc. can lead to confusion as to what these labels actually refer to.

Another example of a Korean music genre with fuzzy boundaries is Ballad. The popularity of Ballad peaked in the 1980s, and it is still one of the most popular genres in Korea as demonstrated in Table 2. Bugs Music’s genre/style dictionary defines Ballad as (translated):

Ballad is not a genre but a style. In other words, ballad is not a specific form of music that exists separately, but is used in conjunction with other genres to indicate a particular mood of the music. (e.g., Rock ballad, Pop ballad, Jazz ballad). In popular music, when the term “Ballad music” is used, it typically indicates a sentimental song with a slow tempo and sad content (usually about a breakup).

Here, “Ballad” is defined as a style which is dependent on a genre, yet the term is used as a genre in a number of websites, including Bugs Music itself. Websites such as Bugs or Melon provide a list of styles to complement the genre classification, but some of these styles are essentially combinations of two genre terms (e.g., Dance Pop, Pop Rock, Rap-Metal, Club/Dance) which can also be confusing to users.

4.3.3 Unique Genres

Several genres we observed are unique to Korean music. Korean Traditional music such as *minyo* (민요) or *pansori* (판소리) were categorized under the term *gukak* (국악). Another example of a unique genre from popular music is Trot which refers to a distinctive style of popular music that does not exist in Western culture. The term Trot (트로트) is used to describe a “South Korean sentimental love song style performed with an abundance of vocal inflections [12]”. This unique style of music has existed in Korea since the early 20th century and is typically enjoyed by older people. Mapping this music to a Western genre based on musical characteristics is simply not possible because there is not a good counterpart to this style of music. We conjecture that it is very likely that this type of music will end up being categorized as International or World music. However, in other non-Western cultures, we can in fact find similar styles of music to Trot. For instance, Trot and Japanese Enka music do share some musical similarities, but in the websites we analyzed, these genres were never grouped together under the same category. Although Trot is probably the most unfamiliar genre of the eight genres to Americans, there were much more disagreements among Ballad, R&B, and Rock than Trot. When the genre is unique and not similar to any of the genres listeners are accustomed to, it may be easier to identify than a genre that is adopted slightly differently in multiple cultures.

4.3.4 Composite and Hybrid Genres

Examining Table 1 and 2 shows that several genres are often used together; for example, Jazz and Blues, Ballad and R&B, Soul and Urban; Club and Dance, Hip-hop and Rap, etc. From an outsider perspective, some of these combinations of genres may appear baffling: what are the differences among R&B/Ballad, Hip-hop/R&B and R&B/Soul? Composite genres may reflect culturally significant distinctions. For instance, on Bugs music, Ballad/R&B is a sub-genre of *Gayo* (K-pop), but R&B/Soul

is a sub-genre of Pop songs (Western popular music). This is because in Korea, Ballad is generally used for any slow and sentimental songs, thus fitting well with R&B. This may be why there was such high disagreement between these genres (see Table 5).

Similarly, we observed many K-pop songs that are difficult to categorize in one genre; rather, they are better described as a hybrid, mixing components of several different styles of music (e.g., rap + dance + rock). This trend can be explained by two reasons: the influence of Seo Taiji and the popularity of idol groups in Korea.

The K-pop artist Seo Taiji had a major influence on Korean hybrid music styles. He is considered a central K-pop figure, and was the first to combine elements from multiple genres including Dance, Rock, Rap, Hip-hop, Ballad, and even Korean Traditional music, *gukak*. His influence is still found in many K-pop songs today. In fact, hybridity is now regarded as one of the most significant aspects of contemporary K-pop culture [11].

Another reason for the hybridity of K-pop music is the popularity of idol groups. The “idol” culture is quite prominent in South Korea. Major entertainment companies select young teenagers, have them go through years of training, and debut them in groups [3]. These groups are strategically created and often consist of members who have different strengths (e.g., singer, dancer, rapper). Therefore the music they present is also designed to integrate and accentuate the multiple roles and styles of the group’s members. In this way, Idol as a genre, is a hybrid fusion of multiple music styles and influences.

Websites	Genre/Style Labels for Album <i>Hayeoga</i>
Melon	Genre: Rock ; Style: 90’s Ballad, Alternative Rock, Rap-Metal, 90’s Dance
Bugs	Genre: Pop ; Style: Dance Pop
Naver	Genre: Dance, Rock
Olleh	Genre/Style: Gayo (Kpop)/All
Daum	Genre: Gayo (Kpop) > Dance
M.net	Genre: Gayo (Kpop) > Dance, Rock

Table 6. Genre/Style Labels assigned for Seo Taiji’s Album *Hayeoga* (하여가)

Although this creative approach of mixing different styles of music led to many popular K-pop songs, it also poses challenges for classifying these songs into a particular genre. For instance, Table 6 shows how one of Seo Taiji’s albums was categorized in multiple Korean Websites. As you can see, it is categorized in multiple genres/styles including Rock, Ballad, Dance, Rap-Metal, and K-pop. Our 6 participants annotated the genre of the title track *Hayeoga* as: Rock (3), Ballad (2), and Dance (1).

5. CONCLUSION AND FUTURE WORK

As we investigated genres used in Korean music distribution websites and analyzed the annotation results, we discovered a number of issues, some that are unique to Korean culture and music, and some that are common issues of musical genres in any context. While the Korean websites we examined shared many genres with the ones used in Western culture, certain labels (i.e., Pop, Ballad) refer to different styles of music and there were also a few

unique genres that reflect the context of K-pop culture. Annotation results show more disagreement for these genres as well. We also noted that genres are constructed based on multiple different criteria in addition to similarities in musical styles. In the Korean context, genres based on associated uses, purposes, and regions seem to be important. Mapping genre labels from multiple cultures will be challenging due to the different structure that values certain characteristic of division over the others in addition to genres that are unique to particular cultures.

In our future work, we plan to expand this study by collecting genres from other cultures for comparison. In addition, we want to conduct in-depth interviews of users from different cultures and ask how they understand, determine, and organize musical genres.

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7. REFERENCES

- [1] S. Doraisamy, H. Adnan, and N. M. Norowi: “Towards a MIR system for Malaysian music,” *Proc. of the ISMIR*, pp. 342-343, 2006.
- [2] K. L. Gwet: *Handbook of Inter-Rater Reliability*, Gaithersburg: Advanced Analytics, LLC, 2010.
- [3] E-Y. Jung: “Articulating youth culture through global popular music styles: Seo Taiji’s use of rap and metal,” *Korean Pop Music: Riding the Wave*, Folkestone: Global Oriental, 2006.
- [4] J. H. Lee and J. S. Downie: “Survey of music information needs, uses, and seeking behaviours: preliminary findings,” *Proc. of the ISMIR*, pp. 441-446, 2004.
- [5] J. H. Lee, J. S. Downie, and S. J. Cunningham: “Challenges in cross-cultural/multilingual music information seeking,” *Proc. of the ISMIR*, pp.1-7, 2005.
- [6] K. Markey: “Inter-indexer consistency tests,” *Lib. and Info. Sci. Research*, Vol. 6, pp. 155–177, 1984.
- [7] D. McEnnis and S. J. Cunningham: “Sociology and music recommendation systems,” *Proc. of the ISMIR*, pp. 185-186, 2007.
- [8] N. M. Norowi, S. Doraisamy, and R. Wirza: “Factors affecting automatic genre classification: An investigation incorporating non-Western Musical form,” *Proc. of the ISMIR*, pp. 13-20, 2005.
- [9] F. Pachet: Content management for electronic music distribution, *Communications of the ACM*, Vol. 46, No. 4, pp. 71-75, 2003.
- [10] J-S. Park: “Korean American youth and trans-national flows of popular culture across the Pacific,” *Amerasia Journal*, Vol.30, No.1, pp.147-169, 2004.
- [11] D. Shim: “Hybridity and the rise of Korean popular culture in Asia,” *Media Culture Society*, Vol.28, no.1, pp. 25-44, 2006.
- [12] M-J. Son: “Regulating and negotiating in T’ûrot’û, a Korean popular song style,” *Asian Music*, Vol.37, No.1, pp. 51-74, 2006.
- [13] F. Vignoli: “Digital music interaction concepts: A user study,” *Proc. of the ISMIR*, pp. 415-421, 2004.